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Docket No.: GBV-10528

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MAIL STOP: APPEAL BRIEF-PATENTS

By: _____ Date: April 5, 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Application No.	:	10/782,324	Confirmation No. 7620
Applicant	:	Stefan Raav et al.	
Filing Date	:	February 19, 2004	
Title	:	Locking Device Having an Actuating Lever for an Adjustable Steering Column	
TC/AU	:	3682	
Examiner	:	Colby M. Hansen	
Customer No.	:	24131	

BRIEF ON APPEAL

S i r :

This is an appeal from the final rejection in the Office action dated March 17, 2006, finally rejecting claims 1 and 3-11.

Appellants submit this *Brief on Appeal* and appellants' payment in the amount of $500.00 to cover the fee for filing the *Brief on Appeal*.

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Real Party in Interest:

This application is assigned to *Volkswagen Aktiengesellschaft* of Wolfsburg, Germany. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1 and 3-11 are rejected and are under appeal. Claim 2 was canceled in an amendment filed April 25, 2005.

Status of Amendments:

No claims were amended after the final Office action. The instant appeal was taken directly following the final Office action, without the submission of a response under 37 CFR § 1.116.

Summary of the Claimed Subject Matter:

As stated in the first paragraph on page 1 of the specification, the invention relates to a locking device having an actuating lever for an adjustable steering column in a vehicle, in particular having an actuating lever disposed centrally below the steering column.

Appellants described the drawings in the text starting on page 12, line 15. There, an adjustable steering column 1 for a motor vehicle is shown with a locking device 4 which has intermeshing clamping disks 2 and 3. The clamping disks 2 are arranged in the tangential direction on both sides of a casing tube 5 enclosing the steering column 1. The clamping disks 3 are arranged on a console 6 which is fastened to a main crossmember in the region of the dashboard. The casing tube 5 is arranged in a manner such that it can be pivoted with respect to the console 6 within a narrow angular range (approximately 5°) and, moreover, such that it can be displaced axially, so that the position of the steering column 1 and of a steering wheel to be provided on the latter can be changed. The clamping disks 2 and 3 are operatively connected to a device 7 which either brings them frictionally into abutment against one another or spreads them apart, so that the casing tube 5 is locked together with the steering column 1 in the selected position with respect to the console 6, whereas, in the other case, the clamping disks 2 and 3 are released from each other, with the result that the casing tube 5 can be adjusted with respect to the console 6 as described above. The steering-column configuration in this case is such that the steering column 1 can be changed in position within an adjustment range V which is illustrated, in which case an axial adjustment distance *a* of up to 50 mm and an adjustment of the angle of inclination of approximately 5° is made possible, which corresponds to a height adjustment distance of approximately 40 mm.

Appellants explained on page 13 of the specification, line 19, that the device 7 has an actuating lever 8 which is disposed centrally and has a rectangular section

formed of steel sheet, with a handle component 9 which is formed of a steel sheet core and a plastic casing. The handle component is screwed onto the actuating-side end of the lever. This actuating lever 8, which is illustrated in perspective in Fig. 2, is shown in Fig. 1 by solid lines in its locking position and by dashed lines in a release position, in which the steering column 1 can be adjusted within the range of adjustment V. The actuating lever 8 is bent in a hook-shaped manner on the side of the handle component and is configured as a deformation element. For this purpose a predetermined buckling point S is formed in the region of an angled section wherein the angle is substantially 90° and wherein the buckling point S is provided by a reduction in cross section of substantially 50%.

Appellants further stated on page 14 of the specification, line 10, that the locking device and the casing tube 5 are surrounded by a two-part steering-column cladding, the lower part of which, the lower shell 10, is illustrated in perspective view in Fig. 5 and in dash-dotted lines in Fig. 1 in three longitudinal positions, the central one of which constitutes the starting position A and the positions B and C each representing the final position in the two possible directions of adjustment. The lower shell 10 is connected to the casing tube 5 and is adjusted together with it when the latter is adjusted. The lower shell 10 has a receiving trough 11, which extends toward the casing tube 5 and is intended for receiving the handle component 9. The lower shell 10 has a slot 12 such that the actuating lever 8 can pass through the slot 12 and can pivot in its vertical plane of arrangement. The actuating lever 8 is articulated such that it is fixed on the vehicle, with the result that the actuating lever 8 and the handle component 9 in the receiving trough take up different positions, in each case in the

locking position, as a function of the longitudinal adjustment of the casing tube 5. In its locking position, the handle component 9, on its side facing away from the steering column 1, ends flush with the lower shell 10. The latter is configured as a deformation element and is formed of closed-cell PUR (polyurethane) foam with a density of 30 g/l and a decorative outer skin. The deformation distance which is available for the lower shell 10 in the region of the receiving trough 11 in the vertical plane until it abuts against the clamping disks 3 is 40 to 45 mm, depending on the position of the lower shell 10 with respect to the disk assembly of the clamping disks 3. The deformation distance for the handle component 10 arranged on the actuating lever 8 is approximately 50 mm.

Appellants finally explained on page 15 of the specification, line 17, that, if the vehicle driver's knee impacts against the lower shell 10 in the region of the handle component 9, both the lower shell 10 and the actuating lever 8 can be deformed toward the casing tube 5 within the above-described scope with energy being absorbed, the actuating lever 8 being buckled and collapsed in the region of the predetermined buckling point S until the handle component 9 rests against its elongated region.

Figs. 3 and 4 show an alternative cross-sectional form for the actuating lever. The cross section is in the shape of a T-section. The central web is essentially left out in the region of the predetermined buckling point S, so that a rectangular cross section is provided there.

References Cited:

US 5,531,317	Tomaru	July 2, 1996
WO 00/69704	Polz, et al.	Nov. 23, 2000

Grounds of Rejection to be Reviewed on Appeal:

1. Whether or not claims 1 and 3-11 are obvious over Tomaru in view of Polz, et al. under 35 U.S.C. § 103.

Argument:

Claims 1, 3-6, 11:

According to the Examiner, the reference to Tomaru "discloses the claimed invention except for the explicit disclosure of a lever member pre-designed for impact absorption". Final rejection, page 3 (emphasis in original).

The Examiner then cited Polz and pointed to the disclosure of a hinge of a motor vehicle front hood which, in the event of a pedestrian impact "undergoes a plastic deformation." Polz (corresp. U.S. Patent No. 6,755,268), col. 3, lines 24-27.

The Examiner concluded that it "would have been obvious . . . to have utilized the impact absorbing connection . . . in the event of impact between a human and shift lever, the lever with [sic] easily deform." Final rejection, p. 3.

The rejection is clearly in error. First, it is based on impermissible hindsight and, second, the combination of the teachings does not lead to the invention defined in either independent claim 1 or 11.

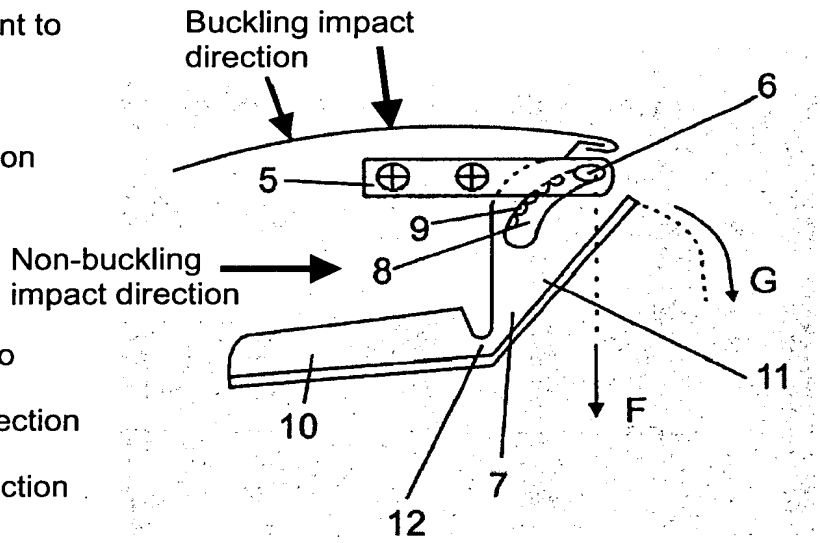
Tomaru indeed shows a steering column lock with a locking handle next to the column. With the handle 11 pivoted up, the steering column is locked, with the handle 11 pivoted down, the column is released for adjustment. That is, the "release position is below the locking position," as recited in claims 1 and 11. Also, Tomaru has a handle component formed at the free end of the lever, as recited in claims 1 and 11.

Tomaru does not provide for the "design buckling" as it is recited in the claims, which causes the handle component to move towards the casing tube encasing the steering column.

According to the law of obviousness, there are two steps required at this point: First, the person of ordinary skill in the art would have to recognize the problem. Second, of many possible solutions, the person of ordinary skill in the art would have to look for and find Polz, and combine the teaching of the secondary reference with that of the primary reference Tomaru. It is quite clear that the Examiner has not carried his burden of making out a *prima facie* case of obviousness.

The secondary reference Polz deals with an assembly for attaching a front hood assembly to the chassis of an automobile. The hood is pivotally mounted to a "body-side holder", i.e., a hinge bracket (7) that is in turn rigidly attached to the chassis.

Polz is concerned with a bivalent problem. On the one hand, the hinge should be rigid and non-buckling in the event of a front-impact crash. On the other hand, the hinge should give on the occasion that a pedestrian lands on the hood. That is, the hinge should be completely resistant to impact along the horizontal (in this drawing Fig. 2), yet should deform on occasion of an impact with a vertical force component. That is, Polz's hinge is configured for two directions of impact, where one direction allows buckling while the other direction does not.



We would not disagree with a statement that the mechanical arts know "predetermined buckling points." We also agree that the mechanical arts have known such predetermined buckling points for safety reasons. We do not agree, however, with the statement that Polz teaches an obvious modification of the primary reference Tomaru.

In order for an obviousness rejection to withstand scrutiny, the rejection must satisfy certain requirements: When "it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation **in the prior art** to make the selection made by the applicant". Interconnect Planning Corp. v. Feil, 227 USPQ 543, 551 (Fed. Cir. 1985) (emphasis

added). "Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination". In re Bond, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). "Under Section 103 teachings of references can be combined **only** if there is some suggestion or incentive to do so." ACS Hospital Systems, Inc. v. Montefiore Hospital et al., 221 USPQ 929, 933, 732 F.2d 1572 (Fed. Cir. 1984) (emphasis original). "Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be '**clear and particular.**'" Winner Int'l Royalty Corp. v. Wang, 53 USPQ2d 1580, 1587, 202 F.3d 1340 (Fed. Cir. 2000) (emphasis added; citations omitted); Brown & Williamson Tobacco Corp. v. Philip Morris, Inc., 56 USPQ2d 1456, 1459 (Fed. Cir. Oct. 17, 2000). We cannot find any "clear and particular" teaching or suggestion in either reference to lead to the combination.

In establishing a *prima facie* case of obviousness, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion, or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from applicants' disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir. 1988). The Examiner has not provided the requisite reason why one of

ordinary skill in the art would have been led to modify Tomaru's teachings with Polz in order to arrive at the claimed invention.

The one thing that is obvious, is that the "suggestion" or "incentive" is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps . . . . The references **themselves** must provide some teaching whereby the applicant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references. We are even led to suspect that the secondary reference Polz appeared in response to a word search query looking for "plastic deformation" and "buckling" or the like. We are less than certain that a conventional classification tree search would have led to the secondary reference.

In terms of a more "structural, mechanical" argument, the hinge arm 10, 11 of Polz is not a lever with a free end and an articulated end. The hinge arm is rigidly mounted to the chassis of the automobile. The hood 1 is articulated at the arm 11. When the hood is impacted from the front end (e.g., horizontal force vector) the arm 10, 11 should not deform. When the hood is impacted from above – e.g. by a pedestrian – then the arm 10, 11 should deform at the buckling point 12. The design deformation would tend to "straighten" the arm 10, 11. If one were to apply this to Tomaru, the handle 11 would align with the long direction of the lever 11a and, if anything, the handle would stick out even farther and be even more of a hazard to the driver.

Much in contrast, the claims require that the plastic deformation of the device in the case of a crash cause the handle to move "toward said tilt-adjustable casing tube." That is, the combination, even if it were proper, would not lead to the claimed invention.

The prior art of record does not show or suggest an actuating lever for a steering column having an angled region formed with a predetermined buckling point and being configured as a deformation element for absorbing energy wherein the actuating lever is plastically deformable in a crash such that the handle component moves toward the tilt-adjustable casing tube, as recited in amended claims 1 and 11.

Claims 7-10

Claim 7 adds a "steering-column cladding" with a receiving trough in which the handle is placed in the locked position. Claim 8 requires that the cladding be a deformation element for absorbing impact energy.

The primary reference Tomaru does not show a steering column cladding. The secondary reference Polz, of course, deals with a front hood assembly. Polz does not contain any disclosure towards a steering column.

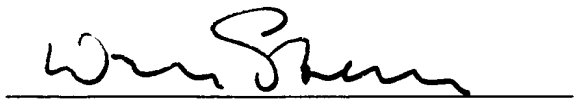
The Primary Examiner apparently recognized the darth of information in the references of record and asserted that "said 'cladding' is known within the automobile industry commonly as a 'kick panel'. Utilizing a 'kick panel' with padding and with a 'trough' (i.e. counterbore with slot) is old and well known." Final rejection, p. 3, bottom. Appellants cannot accept such examination. A rejection should be

based on proper proof of facts. The patent examiner must search the technical and patent literature and provide factual support concerning prior art knowledge. Where a certain element cannot be readily located in the literature, the examiner may take *official notice* as to the existence of the element in the pertinent art. Here, the afore-quoted statement by the Examiner does not rise to the level of *official notice*. It would furthermore appear that a collapsible steering-column cladding or similar subject matter would be available in a prior art patent reference.

Even if, arguendo, the Examiner had cited a proper reference with regard to the steering-column cladding, the above discussion concerning the references Tomasu and Polz would still fall far short of rendering obvious the remaining elements of claims 7 - 8.

The honorable Board is therefore respectfully urged to reverse the final rejection of the Primary Examiner.

Respectfully submitted,



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Claims Appendix:

1. A locking configuration, comprising:

an adjustable steering column;

a fixed mounting;

a tilt-adjustable casing tube secured on said fixed mounting, said tilt-adjustable casing tube surrounding said adjustable steering column;

a locking device provided between said fixed mounting and said tilt-adjustable casing tube, said locking device having an actuating lever pivotally mounted about a pivot point between a locking position and a release position laterally next to or below said tilt-adjustable casing tube ~~and~~ such that the release position is below the locking position;

a handle component disposed at a free end of said actuating lever, said handle component being disposed at a given distance from said tilt-adjustable casing tube when said actuating lever is in the locking position; and

said actuating lever having an angled region formed with a predetermined buckling point between said pivot point and said handle component and being configured as a deformation element for absorbing energy wherein said actuating lever is plastically deformable in a crash such that said handle component moves toward said tilt-adjustable casing tube.

3. The locking configuration according to claim 1, wherein said angled region is a hook-shaped bent region adjacent said handle component.

4. The locking configuration according to claim 1, wherein:

said actuating lever has a cross-sectional profile selected from the group consisting of a rectangular profile and a T-shaped profile; and

said angled region having a reduction in cross section for forming a predetermined buckling point.

5. The locking configuration according to claim 1, wherein:

said actuating lever is formed of metal; and

said handle component has a metal core with a plastic coating and is screwed to said actuating lever.

6. The locking configuration according to claim 1, wherein:

said actuating lever is formed of steel;

said handle component has a metal core with a plastic coating; and

said actuating lever and said handle component are connected to one another as a two-part element.

7. The locking configuration according to claim 1, including:

a steering-column cladding surrounding said locking device and said tilt-adjustable casing tube;

said steering-column cladding having a receiving trough formed therein for accommodating said handle component; and

said receiving trough extending in a direction toward said tilt-adjustable casing tube and having a recess formed therein for providing a pass-through for said actuating lever.

8. The locking configuration according to claim 7, wherein said steering-column cladding is configured as a deformation element for absorbing impact energy.

9. The locking configuration according to claim 7, wherein:
said handle component has a side facing away from said steering column; and

said side of said handle component facing away from said steering column is disposed substantially flush with said steering-column cladding when said actuating lever is in the locking position.

10. The locking configuration according to claim 7, including deformation elements provided between said tilt-adjustable casing tube and said steering-column cladding.

11. In combination with a vehicle having an adjustable steering column, a fixed mounting and a tilt-adjustable casing tube secured on the fixed mounting and surrounding the adjustable steering column, a locking device, comprising:

an actuating lever pivotally mounted about a pivot point between a locking position and a release position laterally next to or below the tilt-adjustable casing tube such that the release position is below the locking position;

a handle component connected to said actuating lever at a free end thereof distal from said pivot point, said handle component being disposed at a given distance from the tilt-adjustable casing tube when said actuating lever is in the locking position; and

said actuating lever having an angled region formed with a predetermined buckling point between said pivot point and said handle component and being configured as a deformation element for absorbing energy wherein said actuating lever is plastically deformable in a crash such that said handle component moves toward the tilt-adjustable casing tube.

Evidence Appendix:

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or any other evidence has been entered by the Examiner and relied upon by appellant in the appeal.

Related Proceedings Appendix:

Since there are no prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal, no copies of decision rendered by a court or the Board are available.